

10/566823

IAP9 Rec'd PCT/PTO 31 JAN 2006

1

SEQUENCE LISTING

<110> Queen Mary & Westfield College  
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Li, Suling

<120> Microsome Vaccine

<130> P35703WO/NCB

<140> PCT/GB2004/003285

<141> 2004-07-30

<150> GB 0318096.5

<151> 2003-08-01

<160> 317

<170> PatentIn version 3.1

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Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp  
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Gly His Asn Arg Glu  
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Ala Thr Gly Phe Lys Gln Ser Ser Lys  
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Trp Arg Arg Ala Pro Ala Pro Gly Ala Lys Ala Met Ala Pro Gly  
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Gln Ser Ser Ser Ser Glu Glu Ile Val  
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Ser

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Gly Pro Arg Leu Gly Val Arg Ala Thr  
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Arg Leu Gly Val Arg Ala Thr Arg Lys  
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Asp Leu Met Gly Tyr Ile Pro Leu Val  
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Tyr Pro Pro Lys Pro Cys Gly Ile  
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Asp Leu Asn Met Met Leu Asn Ile Val  
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<210> 274  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 274

Asp Leu Asn Thr Met Leu Asn Val Val  
1 . . . . . 5

<210> 275  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 275

Glu Arg Tyr Leu Arg Asp Gln Gln Leu  
1 . . . . . 5

<210> 276  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 276

Arg Ala Glu Gln Ala Ser Gln Glu Val  
1 5

<210> 277  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 277

Tyr Pro Leu Thr Phe Gly Trp Cys Tyr  
1 5

<210> 278  
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<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 278

Tyr Pro Leu Thr Phe Gly Trp Cys Phe  
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<210> 279  
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<400> 279

Phe Arg Asp Tyr Val Asp Arg Phe Tyr Lys  
1 5 10

<210> 280  
<211> 10  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 280

Phe Arg Asp Tyr Val Asp Arg Phe Phe Lys  
1 5 10

<210> 281  
<211> 10  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 281

Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys  
1 5 10

<210> 282  
<211> 10  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 282

Lys Arg Trp Ile Ile Met Gly Leu Asn Lys  
1 5 10

<210> 283  
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<212> PRT  
<213> Human immunodeficiency virus type 1  
  
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Thr Ala Val Pro Trp Asn Ala Ser Trp  
1 5

<210> 284  
<211> 8  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 284

Val Pro Leu Arg Pro Met Thr Tyr  
1 5

<210> 285  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 285

His Pro Asp Ile Val Ile Tyr Gln Tyr  
1 5

<210> 286  
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<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 286

Asn Pro Asp Ile Val Ile Tyr Gln Tyr  
1 5

<210> 287  
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<212> PRT  
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<400> 287

Pro Pro Ile Pro Val Gly Asp Ile Tyr  
1 5

<210> 288  
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<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 288

Ile Pro Leu Thr Glu Glu Ala Glu Leu  
1 5

<210> 289  
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<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 289

Asp Pro Asn Pro Gln Glu Val Val Leu  
1 5

<210> 290  
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<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 290

Leu Pro Cys Arg Ile Lys Gln Ile Ile  
1 5

<210> 291  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 291

Ala Thr Gln Glu Val Lys Asn Trp Met  
1 5

<210> 292  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 292

Ala Ser Gln Glu Val Lys Asn Trp Met  
1 5

<210> 293  
<211> 10  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 293

Asp Thr Ile Asn Glu Glu Ala Ala Glu Trp  
1 5 10

<210> 294  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 294

Gln Ala Thr Gln Glu Val Lys Asn Trp  
1 5

<210> 295  
<211> 10  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 295

Glu Val Lys Asn Trp Met Thr Glu Thr Leu  
1 5 10

<210> 296  
<211> 10  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 296

Thr Ser Thr Leu Gln Glu Gln Ile Gly Trp  
1 5 10

<210> 297  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 297

Leu Ser Pro Arg Thr Leu Asn Ala Trp  
1 5

<210> 298  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 298

Ile Ser Pro Arg Thr Leu Asn Ala Trp  
1 5

<210> 299  
<211> 11  
<212> PRT  
<213> Human immunodeficiency virus type 1  
  
<400> 299

Lys Ala Phe Ser Pro Glu Val Ile Pro Met Phe  
1 5 10

<210> 300  
<211> 8  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 300

Gln Ala Ile Ser Pro Arg Thr Leu  
1 5

<210> 301  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 301

Ser Phe Asn Cys Gly Gly Glu Phe Phe  
1 5

<210> 302  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 302

Lys Tyr Arg Leu Lys His Leu Val Trp  
1 5

<210> 303  
<211> 9  
<212> PRT  
<213> Human immunodeficiency virus type 1

<400> 303

Gln Ala Ser Gly Glu Val Lys Asn Trp  
1 5

<210> 304  
<211> 10  
<212> PRT  
<213> Hepatitis C virus

<400> 304

Cys Val Ile Gly Gly Ala Gly Asn Asn Thr  
1 5 10

<210> 305  
<211> 9  
<212> PRT  
<213> Hepatitis C virus

<400> 305

Gly Pro Arg Leu Gly Val Arg Ala Thr  
1 5

<210> 306  
<211> 8  
<212> PRT  
<213> Hepatitis C virus

<400> 306

Gly Pro Arg Leu Gly Val Arg Ala  
1 5

<210> 307  
<211> 10  
<212> PRT  
<213> Hepatitis C virus

<400> 307

Trp His Tyr Pro Pro Lys Pro Cys Gly Ile  
1 5 10

<210> 308  
<211> 11  
<212> PRT  
<213> Hepatitis C virus

<400> 308

Tyr Pro Pro Lys Pro Cys Gly Ile Val Pro Ala  
1 5 10

<210> 309  
<211> 8  
<212> PRT  
<213> Hepatitis C virus

<400> 309

Tyr Pro Pro Lys Pro Cys Gly Ile  
1 5

<210> 310  
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<212> PRT  
<213> Hepatitis C virus

<400> 310

Ser Thr Asn Pro Lys Pro Gln Lys  
1 5

<210> 311  
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<212> PRT  
<213> Hepatitis C virus

<400> 311

Met Ser Thr Asn Pro Lys Pro Lys Lys Asn Lys  
1 5 10

<210> 312  
<211> 9  
<212> PRT  
<213> Hepatitis C virus

<400> 312

Cys Val Asn Gly Val Cys Trp Thr Val  
1 5

<210> 313  
<211> 10  
<212> PRT  
<213> Hepatitis C virus

<400> 313

Lys Leu Val Ala Leu Gly Ile Asn Ala Val  
1 5 10

<210> 314  
<211> 365  
<212> PRT  
<213> Homo sapiens

<400> 314

Met Ala Val Met Ala Pro Arg Thr Leu Val Leu Leu Leu Ser Gly Ala  
1 5 10 15

Leu Ala Leu Thr Gln Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe  
20 25 30

Phe Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ala  
35 40 45

Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala  
50 55 60

Ala Ser Gln Arg Met Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly  
65 70 75 80

Pro Glu Tyr Trp Asp Gly Glu Thr Arg Lys Val Lys Ala His Ser Gln  
85 90 95

Thr His Arg Val Asp Leu Gly Thr Leu Arg Gly Tyr Tyr Asn Gln Ser  
100 105 110

Glu Ala Gly Ser His Thr Val Gln Arg Met Tyr Gly Cys Asp Val Gly  
115 120 125

Ser Asp Trp Arg Phe Leu Arg Gly Tyr His Gln Tyr Ala Tyr Asp Gly  
130 135 140

Lys Asp Tyr Ile Ala Leu Lys Glu Asp Leu Arg Ser Trp Thr Ala Ala  
145 150 155 160

Asp Met Ala Ala Gln Thr Thr Lys His Lys Trp Glu Ala Ala His Val  
165 170 175

Ala Glu Gln Leu Arg Ala Tyr Leu Glu Gly Thr Cys Val Glu Trp Leu  
180 185 190

Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Thr Asp Ala  
195 200 205

Pro Lys Thr His Met Thr His His Ala Val Ser Asp His Glu Ala Thr  
210 215 220

Leu Arg Cys Trp Ala Leu Ser Phe Tyr Pro Ala Glu Ile Thr Leu Thr  
225 230 235 240

Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu  
245 250 255

Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ala Val Val  
 260 265 270

Val Pro Ser Gly Gln Glu Gln Arg Tyr Thr Cys His Val Gln His Glu  
 275 280 285

Gly Leu Pro Lys Pro Leu Thr Leu Arg Trp Glu Pro Ser Ser Gln Pro  
 290 295 300

Thr Ile Pro Ile Val Gly Ile Ile Ala Gly Leu Val Leu Phe Gly Ala  
 305 310 315 320

Val Ile Thr Gly Ala Val Val Ala Ala Val Met Trp Arg Arg Lys Ser  
 325 330 335

Ser Asp Arg Lys Gly Gly Ser Tyr Ser Gln Ala Ala Ser Ser Asp Ser  
 340 345 350

Ala Gln Gly Ser Asp Val Ser Leu Thr Ala Cys Lys Val  
 355 360 365

<210> 315  
 <211> 362  
 <212> PRT  
 <213> Homo sapiens

<400> 315

Met Leu Val Met Ala Pro Arg Thr Val Leu Leu Leu Ser Ala Ala  
 1 5 10 15

Leu Ala Leu Thr Glu Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe  
 20 25 30

Tyr Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ser  
 35 40 45

Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala  
50 55 60

Ala Ser Pro Arg Glu Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly  
65 70 75 80

Pro Glu Tyr Trp Asp Arg Asn Thr Gln Ile Tyr Lys Ala Gln Ala Gln  
85 90 95

Thr Asp Arg Glu Ser Leu Arg Asn Leu Arg Gly Tyr Tyr Asn Gln Ser  
100 105 110

Glu Ala Gly Ser His Thr Leu Gln Ser Met Tyr Gly Cys Asp Val Gly  
115 120 125

Pro Asp Gly Arg Leu Leu Arg Gly His Asp Gln Tyr Ala Tyr Asp Gly  
130 135 140

Lys Asp Tyr Ile Ala Leu Asn Glu Asp Leu Arg Ser Trp Thr Ala Ala  
145 150 155 160

Asp Thr Ala Ala Gln Ile Thr Gln Arg Lys Trp Glu Ala Ala Arg Glu  
165 170 175

Ala Glu Gln Arg Arg Ala Tyr Leu Glu Gly Glu Cys Val Glu Trp Leu  
180 185 190

Arg Arg Tyr Leu Glu Asn Gly Lys Asp Lys Leu Glu Arg Ala Asp Pro  
195 200 205

Pro Lys Thr His Val Thr His His Pro Ile Ser Asp His Glu Ala Thr  
210 215 220

Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Glu Ile Thr Leu Thr  
225 230 235 240

Trp Gln Arg Asp Gly Glu Asp Gln Thr Gln Asp Thr Glu Leu Val Glu  
 245 250 255

Thr Arg Pro Ala Gly Asp Arg Thr Phe Gln Lys Trp Ala Ala Val Val  
 260 265 270

Val Pro Ser Gly Glu Glu Gln Arg Tyr Thr Cys His Val Gln His Glu  
 275 280 285

Gly Leu Pro Lys Pro Leu Thr Leu Arg Trp Glu Pro Ser Ser Gln Ser  
 290 295 300

Thr Val Pro Ile Val Gly Ile Val Ala Gly Leu Ala Val Leu Ala Val  
 305 310 315 320

Val Val Ile Gly Ala Val Val Ala Ala Val Met Cys Arg Arg Lys Ser  
 325 330 335

Ser Gly Gly Lys Gly Gly Ser Tyr Ser Gln Ala Ala Cys Ser Asp Ser  
 340 345 350

Ala Gln Gly Ser Asp Val Ser Leu Thr Ala  
 355 360

<210> 316

<211> 266

<212> PRT

<213> Homo sapiens

<400> 316

Met Val Cys Leu Lys Leu Pro Gly Gly Ser Ser Leu Ala Ala Leu Thr  
 1 5 10 15

Val Thr Leu Met Val Leu Ser Ser Arg Leu Ala Phe Ala Gly Asp Thr  
 20 25 30

Arg Pro Arg Phe Leu Glu Leu Arg Lys Ser Glu Cys His Phe Phe Asn  
35 40 45

Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu  
50 55 60

Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr  
65 70 75 80

Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Leu  
85 90 95

Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr  
100 105 110

Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Gln Val  
115 120 125

Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His Asn Leu Leu  
130 135 140

Val Cys Ser Val Ser Gly Phe Tyr Pro Gly Ser Ile Glu Val Arg Trp  
145 150 155 160

Phe Arg Asn Gly Gln Glu Glu Lys Ala Gly Val Val Ser Thr Gly Leu  
165 170 175

Ile Gln Asn Gly Asp Trp Thr Phe Gln Thr Leu Val Met Leu Glu Thr  
180 185 190

Val Pro Arg Ser Gly Glu Val Tyr Thr Cys Gln Val Glu His Pro Ser  
195 200 205

Val Thr Ser Ala Leu Thr Val Glu Trp Arg Ala Arg Ser Glu Ser Ala  
210 215 220

Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu Gly Leu Leu  
 225 230 235 240

Phe Leu Gly Ala Gly Leu Phe Ile Tyr Phe Arg Asn Gln Lys Gly His  
 245 250 255

Ser Gly Leu Gln Pro Thr Gly Phe Leu Ser  
 260 265

<210> 317  
 <211> 254  
 <212> PRT  
 <213> Homo sapiens

<400> 317

Met Ile Leu Asn Lys Ala Leu Leu Leu Gly Ala Leu Ala Leu Thr Thr  
 1 5 10 15

Val Met Ser Pro Cys Gly Gly Glu Asp Ile Val Ala Asp His Val Ala  
 20 25 30

Ser Tyr Gly Val Asn Leu Tyr Gln Ser Tyr Gly Pro Ser Gly Gln Tyr  
 35 40 45

Thr His Glu Phe Asp Gly Asp Glu Gln Phe Tyr Val Asp Leu Gly Arg  
 50 55 60

Lys Glu Thr Val Trp Cys Leu Pro Val Leu Arg Gln Phe Arg Phe Asp  
 65 70 75 80

Pro Gln Phe Ala Leu Thr Asn Ile Ala Val Thr Lys His Asn Leu Asn  
 85 90 95

Ile Leu Ile Lys Arg Ser Asn Ser Thr Ala Ala Thr Asn Glu Val Pro  
 100 105 110

Glu Val Thr Val Phe Ser Lys Ser Pro Val Thr Leu Gly Gln Pro Asn  
115 120 125

Thr Leu Ile Cys Leu Val Asp Asn Ile Phe Pro Pro Val Val Asn Ile  
130 135 140

Thr Trp Leu Ser Asn Gly His Ser Val Thr Glu Gly Val Ser Glu Thr  
145 150 155 160

Ser Phe Leu Ser Lys Ser Asp His Ser Phe Phe Lys Ile Ser Tyr Leu  
165 170 175

Thr Phe Leu Pro Ser Ala Asp Glu Ile Tyr Asp Cys Lys Val Glu His  
180 185 190

Trp Gly Leu Asp Glu Pro Leu Leu Lys His Trp Glu Pro Glu Ile Pro  
195 200 205

Ala Pro Met Ser Glu Leu Thr Glu Thr Val Val Cys Ala Leu Gly Leu  
210 215 220

Ser Val Gly Leu Val Gly Ile Val Val Gly Thr Val Phe Ile Ile Arg  
225 230 235 240

Gly Leu Arg Ser Val Gly Ala Ser Arg His Gln Gly Pro Leu  
245 250